

ANALYSIS OF
DISCHARGED FIRST TIME MOTHERS RECALL OF
INFORMATION PRESENTED IN POSTPARTUM TEACHING SESSIONS.

THESIS

By

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ABSTRACT OF THESIS

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Gail A. Reichert

29 Apr 98

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THESIS

Gail Ardith Reichert

The Graduate School
University of Kentucky
1998

ANALYSIS OF
DISCHARGED FIRST TIME MOTHERS RECALL OF
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THESIS

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Science in Nursing
at the University of Kentucky

By

Gail Ardith Reichert

Lexington, Kentucky

Director: Dr. Gwendolen Lee, Professor of Nursing

Lexington, Kentucky

1998

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Date: 29 Apr 98

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CHAPTER ONE

Introduction

Background

Postpartum nurses are concerned with the well-being of new mothers and their newborns and with assisting the new mothers to become confident caregivers. One role the postpartum nurse accepts, in order to accomplish this goal, is educator of the new mother about herself and her infant. In recent years, the postpartum nurse has been challenged to effectively educate new mothers in shortened periods of time due to decreased hospital stays (Gillerman & Beckham, 1991; Maloni, 1994; Brown, Towne, & York, 1996).

The length of stay for postpartum mothers ranges from two to 24 hours after delivery in some facilities. However, recent passage of legislation requires insurance companies to reimburse hospitals for 48 hours of postpartum hospital stay (Brown, Towne, & York, 1996). Even with 48 hours, postpartum nurses have many tasks to assist the new mother in gaining confidence in her new role. One of the nursing tasks is educating the new mother about the postpartum period and about infant care. The new mother may not be ready to comprehend this new information. According to Reva Rubin's Maternal Phases (1961), the new mother is not ready to retain teaching information until the "taking hold" phase. The "taking hold" phase is the second phase and often occurs after 48 hours postpartum.

Newly delivered mothers are often exhausted from the labor and delivery process.

They are already overloaded with various types of information, such as hospital routine, insurance questions, naming the baby, and infant photo decisions. Therefore, the learning process is compromised (Martell, Imle, Horwitz, & Wheeler, 1989), which creates a potential problem with retaining the information regarding postpartum education (Maloni, 1994; Regan & Lydon-Rochelle, 1995). In addition, today's families are more isolated from the support systems of the past, such as grandmothers and aunts, who usually assisted the new mother in acclimating her new mothering role. This isolation from the extended family may add an additional burden to the new mother when discharged, and the reality of caring for a newborn occurs. The new mother may feel overwhelmed and insecure in her new role (Davis, Brucker, & MacMullen, 1988). Retention of postpartum and infant teaching is critical at this time. However, few studies have been conducted on knowledge retention of postpartum teaching (Maloni, 1994; Regan & Lydon-Rochelle, 1995).

Purpose of the Study

The purpose of this study is to determine if discharged new mothers retain information regarding postpartum teaching.

Research Question

How much information will first time mothers recall about the content of postpartum teaching following discharge?

Significance

A goal of the postpartum nurse is to insure that new mothers can confidently and appropriately care for themselves and their newborns by the time of discharge. With shortened hospital stays, the postpartum nursing tasks are challenging. Nurses frequently have difficulty finding the appropriate time to provide quality postpartum discharge teaching to new mothers. While the new mother may desire information about herself and her newborn, she may not be ready to learn. Often the new mother is tired, is in pain or discomfort, is caring for her newborn, has visitors, or is taking care of her own personal needs, such as showering, using a sitz bath, or eating. However, postpartum nurses are required to prepare the new mother for discharge and provide postpartum education whether the new mother is ready to learn or not (Field & Renfrew, 1991; Regan & Lydon-Rochelle, 1995). The new mother may have difficulty retaining new information if her attention is not focused on learning (Maloni, 1994).

Since there are no current studies regarding knowledge retention among discharged postpartum primiparas, this study will provide a baseline of information. By determining postpartum knowledge retention of primiparas, nurses interested in obstetrical clients can plan and implement effective and timely teaching methods and provide supportive services to new mothers, such as a follow-up telephone call or a home visit. In addition, this study will provide a foundation for future research in postpartum education. Nurses can study knowledge retention among different obstetrical groups, such as new mothers with sick newborns or multiparas who have the additional task of caring for other children.

Definitions

Postpartum teaching is defined as routine verbal and written instructions for the new mother and her newborn according to the postpartum unit's protocol.

Postpartum knowledge is defined as knowledge obtained from childbirth education, reading materials, or the postpartum discharge teaching session which includes information pertaining to the mother as well as her newborn.

Postpartum knowledge retention will be measured by the subject's response to the "Postpartum Discharge Teaching Questionnaire".

Postpartum is defined by three periods. The first period is immediately after delivery up to the first 24 hours. The second period is considered the early postpartum period and includes the first week after delivery. The third period is called the late postpartum period; this period lasts up to 90 days (Grohar, 1996, p. 250). The focus in this study will be related to the immediate and early postpartum periods.

CHAPTER TWO

Review of the Literature

The literature review consists of two sections. In the first section, the theory of Maternal Phases by Reva Rubin describes the framework for the study. In the second section, the research related to postpartum teaching and readiness to learn is summarized.

Theoretical Framework

Reva Rubin (1961) has identified three phases of maternal adaptation that occur as the postpartum woman takes on her role as mother. The three phases are (1) taking in; (2) taking hold; and (3) letting go. In phase one, the mother mainly focuses on herself and is dependent on others to meet most of her needs. Usually the new mother expresses a need for rest and nutrition; she also relives her birth experience. According to Rubin (1961), the first phase lasts for 24 to 48 hours after giving birth. Phase two consists of the postpartum woman broadening her focus to include her newborn; she becomes less dependent on others for her care and becomes concerned about her bodily functions as well as those of her infant. According to Rubin (1961), this phase is the one in which the postpartum woman is most receptive and ready for teaching. The new mother needs encouragement and praise in her caretaking role. The third phase is "letting go". In this phase, the new mother becomes increasingly independent and more confident in her new role and implements adjustments within the family to accommodate the newborn. At the end of the first week, this phase begins. For the purpose of this study, the focus will be on the first and second phases, "taking in and taking hold".

However, there is some disagreement about the accuracy of Rubin's analysis. Some authors (Neeson & May, 1986; Regan & Lydon-Rochelle, 1995) state that other nursing researchers (Gay, Edgil, & Douglas, 1988) disagree with Rubin and that a new mother will complete these phases sooner than Rubin has determined. Regardless of the disagreement, a new mother requires education about the postpartum period and caring for her newborn. Rubin provides guidelines for observing beginning maternal behaviors (Neeson & May, 1986).

Wrasper (1996) found "general support" for Rubin's Maternal Phases theory but states that the time a postpartum woman enters each maternal phase may differ because of the time of discharge. Some women in Wrasper's (1996) study were discharged at 36 to 48 hours postpartum while others were discharged at 72 hours postpartum. Therefore, some postpartum women may be forced into a phase when they are not psychologically or emotionally ready to take on the tasks associated with each maternal phase. This may lead to postpartum complications such as postpartum depression or postpartum bleeding.

Typically, postpartum discharge teaching is conducted during the "taking in" phase, because most mothers are discharged within 24 to 48 hours after delivery (Davis, Brucker, & MacMullen, 1988; Regan & Lydon-Rochelle, 1995; Brown, Towne, & York, 1996). Due to shortened hospital stays postpartum nurses face the difficulty of educating a postpartum patient when she may not be ready to accept the information, which leads to a potential knowledge deficit (Davis, Brucker, & MacMullen, 1988). The knowledge deficit may then result in or lead to complications of either the mother or the newborn.

Research Related to Postpartum Teaching

A large portion of postpartum nursing care is comprised of educating the new mother about herself and her newborn. Most research regarding postpartum teaching has focused on identifying what new mothers deem as educational priorities (Davis, Brucker, & MacMullen, 1988; Martell, Imle, Horwitz, & Wheeler, 1989; Maloni, 1994). Most postpartum patients acquire their knowledge about postpartum care and infant care from nurses during their maternity hospital stay (Maloni, 1994). Hospital stays are much shorter today, thus limiting the opportunities for effective patient teaching (Davis, Brucker, & MacMullen, 1988; Regan & Lydon-Rochelle, 1995). Postpartum mothers may not acquire adequate knowledge about their postpartum recovery period to detect postpartum or infant complications, which would require readmission to the hospital (Brooten, 1995; Brooten, et al, 1996). Therefore, researchers should assess retention of postpartum knowledge (Maloni, 1994; Regan & Lydon-Rochelle, 1995).

To prevent or minimize problems after the initial discharge, new mothers require information about signs and symptoms of infant illnesses. However, Brooten et al (1996) state that patient learning is difficult after a major medical or surgical event-such as giving birth or after a cesarean section-because often mothers are in pain, are anxious, and require rest. Therefore, new mothers may not be ready to receive new information during shortened hospital stays.

Shortened hospital stays have been the norm in recent years. Martell, Imle, Horwitz, and Wheeler (1989) suggest that the content of postpartum education has not changed in many years. Traditional postpartum teaching content may not be appropriate

for postpartum mothers who participate in short stay programs. Martell, Imle, Horwitz, and Wheeler (1989) define a short stay program as discharge between six and eight hours after delivery. Their study was conducted to determine postpartum teaching priorities among postpartum mothers of short stay programs. The sample consisted of 42 postpartum mothers participating in a short stay program. Using the Q sort method, the subjects rank ordered 24 items. Most of the subjects (81%) ranked warning signs of infant illnesses as the most important. The second highest ranked postpartum teaching item was warning signs of maternal illness, followed by concerns about adequate infant nutritional intake. The investigators found that changes of postpartum education content may be necessary to meet the needs of postpartum mothers participating in short stay programs; they also found that new mothers are frequently not receptive or ready to acquire new knowledge shortly after labor and delivery.

Davis, Brucker, and MacMullen (1988) studied the educational priorities of postpartum mothers. The sample size consisted of 117. Using a questionnaire, the subjects rated the importance of topics pertaining to self-care and newborn care. The study was conducted over a 72-hour postpartum hospital stay. The results of the study indicated that "postpartum complications" and "infant illnesses" were the main teaching priorities for the sample. The study provided information important to nurses regarding teaching content, especially in the current trend of shorter hospital stays. The investigators suggest that nurses should plan teaching strategies to meet the need of each postpartum client. The investigators recommend future research to determine if

postpartum teaching methods are helpful, and if postpartum information is retained by new mothers.

Field and Renfrew's (1991) study also evaluates the effectiveness of postpartum teaching strategies. The investigators identified inconsistencies in postpartum teaching content, such as discussion about family planning methods and maternal feelings.

Frequently, family planning methods are not discussed in response to the mother's needs. Some postpartum mothers state that they did not remember postpartum teaching about maternal feeling, however, the majority of nurses (61%) indicated that discussion about maternal feelings did occur during the postpartum teaching session. The investigators indicate that the postpartum mother may not have been receptive to learning at the time of postpartum discharge teaching. The new mother's focus may have been on her newborn rather than receiving new information.

In another study, Eidelman, Hoffmann, and Kaitz (1993) used a questionnaire to examine the "cognitive function" of postpartum women in the first few days immediately following delivery. They reported that postpartum women have short term deficits in "cognitive function", especially "memory function". The authors caution postpartum educators that new mothers may not remember verbal information given on the first postpartum day.

Regan and Lydon-Rochelle (1995) conducted a pilot study of primiparas to ascertain the effectiveness of postpartum teaching given to patients of certified nurse midwives.

The subjects ($N=100$) were randomly assigned to two groups. The first group, $n=55$, was

given written postpartum instructions only. The second group, $n=45$, was given verbal postpartum teaching instructions by a certified nurse midwife as well as written instructions. Primiparas responded to a 20-item questionnaire. The results of the study indicated that no significant difference existed between the two groups. While the authors found that there were no learning deficits resulting from the teaching method, the authors identified that the new mother may have difficulty in retaining postpartum teaching information possibly due to her low level of readiness to learn. The authors suggest further research to assess maternal readiness for postpartum education during the early postpartum period as well as retention of the postpartum education after discharge.

Summary

Rubin provides postpartum nurses with a frame of reference in understanding the process a woman goes through after she has delivered her infant. As the postpartum woman goes through each maternal phase her needs change and her attention focuses on various aspects as described previously. Several factors that influence the maternal phase process were cited. These factors were the effect of cesarean sections on the capacity of new mother's readiness to learn (Brooten, 1996); the current content of postpartum teaching has not changed in keeping pace with shorter hospital stays and may not meet the needs of new mothers (Martel, Imle, Horwitz, & Wheeler, 1989); teaching strategies (Field & Renfrew, 1991; Regan & Lydon-Rochelle, 1995), and maternal short term memory deficits after delivery (Eidelman, Hoffman, & Kaitz, 1993). These factors not only impact the new mother but also illustrate the important task the postpartum nurse has in providing appropriate and timely postpartum education.

CHAPTER THREE

Methods

Design

A pretest-posttest experimental design as symbolized in Figure 1 was utilized for the study. The subjects were randomly assigned to one of two groups: pretest-posttest or posttest only. In this study, the control group was the posttest only group.

Setting

The setting was in a 301-bed Mid-western teaching military medical center with approximately 500-600 deliveries per year. The postpartum unit consists of 18 beds and is separate from the nursery; each mother has a different nurse than her infant has. Infant rooming-in is available and is strongly encouraged. However, a newborn nursery is available, and mothers may bring their infants into the nursery at any time.

Postpartum teaching activities include either individual or group verbal instructions for both mother and newborn care which is guided by a teaching list. The teaching is done by a primary postpartum nurse and a primary newborn nursery nurse. However, collaboration between the units has occurred and a booklet was created to include postpartum teaching items and newborn care teaching items. The new mothers are given the discharge teaching booklet to use as a reference and to reinforce the verbal instructions. The postpartum hospital stay is usually a minimum of 48 hours for an uncomplicated vaginal delivery and a minimum of 72 hours for an uncomplicated cesarean section delivery.

Figure 1

Symbolic Representation of a Pretest-Posttest (before-after) Experimental Design

R = Randomization	R	O ₁	X	O ₂
O = Observation or measurement				
X = Treatment or intervention	R		X	O ₁

Note. A variation from Nursing Research Principles and Methods (5th ed.) (p. 163), by D. F. Polit and B. P. Hungler, 1995, Philadelphia: J. B. Lippincott Company.

Sample

A convenience, nonprobability sample of primiparas ages 18-36 was obtained through a military medical center. Inclusion criteria were as follows : primipara, ≥ 18 years old, English speaking, had a term (37-42 weeks) normal, uncomplicated vaginal delivery or an uncomplicated cesarean section delivery with healthy newborns as well as an uncomplicated postpartum hospital course. Primiparas were selected in an attempt to control for previous knowledge and experience. If the new mother's postpartum hospital course became complicated or if the healthy newborn was admitted to the Neonatal Intensive Care Unit, the new mother was excluded from the study.

Power Calculation

With an alpha level of 0.05 and a sample size of 20 subjects, a paired t-test will have approximately 69% power to detect a significant change if the ratio of the average difference to the standard deviation is as small as 0.5 and the correlation between the pretest and posttest scores is at least 0.61. Cohen (1988) considers a ratio of average difference to standard deviation of 0.5 to be a medium effect. If the correlation between the pretest and posttest scores is slightly higher and at least 0.75, the power of the paired t-test to detect a medium effect increases to 87%.

Measures

The "Postpartum Discharge Teaching Questionnaire" (Appendix A) was used to collect the data from the subjects. The questionnaire contains a total of 36 statements regarding the postpartum teaching as well as 12 demographic questions. Each subject

responded to a total of 31 statements as true or false based on the postpartum teaching and depending on whether she was bottle-feeding or breastfeeding her infant. The questionnaire includes 13 statements pertaining to the maternal postpartum period, 13 statements regarding newborn care, and five additional statements regarding infant feeding. A "Patient Information Form" (Appendix B) was also used to collect data from the patient's chart. Data from the patient's chart included gravidy and parity, pain medications received during labor and delivery, dates and times of delivery, postpartum teaching and discharge. The questionnaire was developed by this investigator and was based on the postpartum and newborn information provided in the "Me and My Baby" booklet given to postpartum mothers at the participating facility. Based on a review of the literature, no other instruments were found to use in this study.

To provide evidence of content validity, the questionnaire was reviewed by a panel of nine expert nurses. The panel consisted of three nursery nurses, three postpartum nurses, and three doctorally prepared nurses. They evaluated such areas as content, format, wording, and flow of the questionnaire. Most of the recommended changes were made to the questionnaire. The questionnaire was distributed to subjects after the changes were made. In addition, the questionnaire was reviewed and approved for use by the Department of the Air Force (Appendix C). This review mainly consisted of format, wording, and flow of the questionnaire. Verbal authorization was granted by the above noted department to extend the use of the questionnaire through February 1998. This was an additional requirement since the subjects were members of a military community.

Procedures

Protection of Subjects

Measures were taken to protect the confidentiality of the subjects throughout the research process. To protect the identity of the respondents, data security procedures were implemented during data collection, data analysis, and after the project was complete. To maintain confidentiality each questionnaire and Patient Information Form were coded. The codes corresponded with one of the two groups (Appendix D). The Patient Information Form that included the patient's name and address was kept separate from the questionnaire. The postpartum nurse completed the Patient Information Form by reviewing the pregnancy history, the patient's labor and delivery chart, and postpartum chart, and to obtain the subject's mailing address for purposes of mailing the questionnaire. After receiving the completed questionnaire the investigator promptly mailed a form with all of the correct answers to all of the questions to each participant (Appendix E)

The staff nurses on the postpartum unit collected the informed consent forms (Appendix F) and completed the Patient Information Forms. The forms mentioned above were then given to the research assistant who is also a staff nurse on the postpartum unit. The research assistant mailed the questionnaires to the participants. There were no direct benefits to the subjects who participated in this study. No incentives or monetary compensation was offered to the subjects participating in this study. The subjects in this study did not incur any costs. The risks associated with this study were minor.

Completing the questionnaire prior to discharge teaching and after postpartum discharge created an extra task for the new mother which may have caused additional stress.

However, the new mothers who agreed to participate in the study were informed that their participation in the study was voluntary and that they could drop out of the study at any time. The likeliness and seriousness of the increased stress due to completing the questionnaire were minimal. The study was reviewed and approved by the investigator's thesis committee (Appendix G). The study was approved by the University's Medical Institutional Review Board (Appendix H).

Prior to data collection, the investigator obtained permission from the facility where the data collection occurred (Appendix I). Data collected in this study were obtained specifically for research purposes and were collected for a period of three months.

Recruitment of Subjects

Discharge teaching is usually conducted on the patient's first evening after the day of delivery. The subjects who met the inclusion criteria were randomly assigned to either the posttest only group (Group 1) or the pretest-posttest group (Group 2). Patients assigned to the pretest-posttest group (Group 2) were approached by the postpartum staff nurse prior to the discharge teaching session. The postpartum nurse typically conducts the postpartum teaching session. The postpartum staff nurse explained the purpose of the study and its voluntary nature. If the subject was assigned to the posttest only group, (Group 1), the subject was approached by a postpartum staff nurse after the postpartum teaching session. The staff nurse explained the purpose of the study and its voluntary

nature. The new mother was informed that the data she provided would be kept confidential and that she would not be identified.

Written informed consent was obtained prior to the discharge teaching session for the pretest-posttest group and after the discharge teaching session for the posttest only group. A copy of the consent form was given to each participant.

The staff nurses on the postpartum unit were informed about the study, trained in obtaining patient consent and in completing the Patient Information Form. In addition, a copy of the instruction form for the nurses assisting with the study was available for review at the nurse's station on the postpartum unit throughout the study.

Data Collection

The participant was randomly assigned to one of two groups, posttest only (Group 1) or pretest-posttest group (Group 2). Using a randomization schedule from the SAS Random Number Generator Program, participants were assigned to one of the above noted groups. New mothers assigned to the posttest only group (Group 1) were approached by the postpartum staff nurse after the postpartum discharge teaching session. The postpartum staff nurse informed the patient of the nature of the study. If the patient agreed to participate in the study, written informed consent was obtained. The new mother was informed that she would receive a questionnaire by mail and to complete the questionnaire as soon after receipt of the questionnaire as possible. A stamped, addressed return envelope was included with the mailed questionnaire. The new mother was asked to return the completed questionnaire to the investigator in the return envelope within the

first week after being discharged from the hospital.

Patients assigned to the pretest-posttest group (Group 2) were approached by the postpartum staff nurse prior to the discharge teaching session. The postpartum staff nurse informed the patient of the nature of the study. If the patient agreed to participate in the study, written informed consent was obtained. The new mother completed a questionnaire (pretest) prior to her postpartum discharge teaching session. Then, she was informed that she would receive a questionnaire (posttest) by mail in approximately one to three days after she was discharged. The new mothers in Group 2 were asked to complete and return the questionnaire (posttest) to the investigator in the return envelope within the first week after being discharged from the hospital. The pretest questionnaire administered to the new mothers in Group 2 was to assess for prior knowledge about the postpartum period. The postpartum knowledge may have been obtained through childbirth classes, in the literature or both about the postpartum period and newborn care.

Each participant received standard routine care and routine postpartum discharge teaching. Postpartum teaching activities included individual or group verbal instructions for both mother and newborn care. Each participant who completed the questionnaire and returned it to the investigator received a copy of the correct answers to each question as well as specific topic related page numbers referenced in the "Me and My Baby" booklet.

Data Analysis

Descriptive statistics, using frequency distributions, means and standard deviations (as appropriate to the level of measurement) was used to summarize the survey results. A

paired t-test was used to assess the change in knowledge from the time period prior to teaching to the post-discharge period.

The data obtained from the questionnaires were coded by characteristic and topic then compiled in one of two categories: posttest only (Group 1), pretest-posttest (Group 2). Nominal level data such as age, marital status, delivery type, and race were reported using percentages and frequencies for all subjects. Mean and standard deviation values were calculated for age, responses to breastfeeding statements, responses to bottle-feeding statements, and general postpartum knowledge. Chi-square was used to compare the posttest of Group 2 to Group 1 because the data were nominal level and there were two treatment groups consisting of different individuals (Glantz, 1997, p.405). McNemar's Test was used to compare the data within Group 2 (pretest-posttest). Finally, a paired t-test was used to compare the data in Group 1 with Group 2 and the data within Group 2 to see if there was a change in knowledge from the time period prior to discharge teaching to the post discharge period.

Chapter Four

Results

From November 21, 1997 to February 21, 1998, forty-two patients met eligibility criteria for inclusion in the study. Of these, 33 agreed to participate in the study. A total of 17 mothers who agreed to participate were assigned to Group 1 (posttest only). However, five of the mothers agreeing to participate and assigned to Group 1 did not return the posttest. Additionally, one mother assigned to Group 1 completed the questionnaire prior to her discharge from the hospital which disqualified her from the study. The final sample for Group 1 was $n=11$. Sixteen new mothers were assigned to Group 2 (pretest-posttest). Ten of the mothers in Group 2 completed both the pretest and the posttest. Six of the mothers in Group 2 completed the pretest only. The final sample for Group 2 was $n=10$ for a total of 21 subjects in both groups.

Group 1 (posttest only)

The subjects ($n=11$) age range for mothers was from 18 years to 30 years ($M=23.9$ years; $SD=3.5$). Most of the mothers (81.8%) were G1 P1. The majority of the mothers (54.6%) had 16 to 16+ years of formal education, while 45.5% of the mothers had a minimum formal educational level of 12 years. All of the women in Group 1 (posttest only) were Caucasian, two (18.2%) were single and nine (81.8%) were married. None of the mothers in Group 1 reported being separated, divorced, or widowed (Table 1).

All of the women in Group 1 received some form of pain medication during their labor. The majority of the women, six (54.5%), delivered their infants via cesarean section, while five (45.5%) delivered their infants vaginally.

Most of the mothers, eight (72.7%), stated that they were breastfeeding their newborns and three (27.3%) stated that they chose to bottle-feed their newborns.

Childbirth classes were attended by seven of the mothers (70.0%) in Group 1. Three of the mothers (30.0%) reported that they did not attend childbirth classes. One mother did not respond to the childbirth education question.

The majority of the mothers, ten (90.0%), received their postpartum discharge teaching individually by a postpartum staff nurse. Only one mother (9.1%) reported attending a discharge teaching class with other mothers which was taught by a postpartum staff nurse. The majority of mothers had not read the "Me & My Baby" booklet since discharge (Table 2).

Postpartum discharge teaching was done on an average of 45 hours 51 minutes after delivery. The range for postpartum discharge teaching after delivery was 26 hours and 52 minutes to 66 hours and 17 minutes. Seven of the mothers (63.6%) included the date and time on the posttest when they completed the questionnaire. The average posttest was completed 281 hours and 35 minutes, approximately 11 days, after discharge. The range for completing the questionnaire after discharge was 136 hours and 50 minutes, approximately 6 days, to 770 hours and 30 minutes, approximately 32 days. The average hospital stay for mothers in Group 1 was 66 hours and 15 minutes. The hospital stay ranged from 46 hours and 52 minutes to 80 hours and 31 minutes for mothers in Group 1.

Table 1

Demographic Characteristics - Group 1, (n=11)

<u>Characteristic</u>	<u>n</u>	<u>%</u>
<u>Age</u>		
18-23	5	45.5
24-29	5	45.5
30-35	1	9.0
36-41	0	0.0
Total	11	100.0
<u>Education Level</u>		
12 years	3	27.3
13 years	1	9.1
14 years	1	9.1
15 years	0	0.0
16 years	3	27.3
16+years	3	27.3
Total	11	100.0
<u>Marital Status</u>		
Single	2	18.2
Married	9	81.8
Total	11	100.0
<u>Race</u>		
African-American	0	0.0
Hispanic	0	0.0
White	11	100.0
Other	0	0.0
Total	11	100.0

Table 2

Childbirth Factors - Group 1, (n=11)

<u>Factors</u>	<u>n</u>	<u>%</u>
<u>Pain Medication</u>	11	100.0
Epidural	6	54.5
Stadol	1	9.1
Nubain	5	45.5
Other		
General Anesthesia	1	9.1
Spinal	3	27.3
Total	*	*
<u>Type of Delivery</u>		
Vaginal	5	45.5
Cesarean Section	6	54.5
Total	11	100.0
<u>Childbirth Preparation</u>		
Yes	7	70.0
No	3	30.0
Total	10**	100.0
<u>Method of Discharge Teaching</u>		
Individual by an RN	10	90.9
Class taught by an RN	1	9.1
Total	11	100.0
<u>Read 'Me & My Baby' since Discharge</u>		
Yes	5	45.5
No	6	54.5
Total	11	100.0

* The total will not equal 11 or 100% respectively, because some of the mothers received more than one form of pain medication during their labor, delivery, or both.

**1 mother did not respond to this question.

Most of the mothers in Group 1 ($n=11$) responded appropriately to the general postpartum and infant care statements. There were 26 general knowledge statements. The mean for responses to the general knowledge statements was 25.1 ($SD=0.98$)

In reference to the newborn statements, the majority of mothers selected the recommended correct response to the statement. However, some mothers did not recall information about the recommended sleeping position for newborns, normal urination patterns, and cord care.

Eight mothers ($n=8$) stated that they were breastfeeding their newborns. In responding to the five (5) breastfeeding statements, all of the mothers responded appropriately except for one mother. One mother (12.5%) responded that it was not normal for her nipples to be sore and tender during the first few days of breastfeeding her newborn. The mean number of correct responses to the breastfeeding statements was 4.8 ($SD=0.35$).

Of the mothers ($n=3$) who were bottle-feeding, one mother (33.3%) did not know that newborns may require frequent burping during feedings. There were five (5) statements related to bottle-feeding. The mean number of correct responses for the bottle-feeding statements was 4.6 ($SD=0.57$).

Group 2 (pretest-posttest)

The subjects ($n=10$) in Group 2 ranged from age 18 years to 36 years ($M=24.9$, $SD=5.04$). Six of the mothers (60.0%) were G1 P1, three (30%) were G2 P1, and one (10%) was G4 P1. The majority of mothers (70%) had from 14 to 16+ years of formal

education, while 30% of the mothers had between 11 to 13 years of formal education.

Group 2 was more ethnically diverse. Two of the mothers were African-American (20%), one was Hispanic (10%), and seven were Caucasian (70%). Two of the mothers were single (20%), seven were married (70%), and one mother was divorced (10%). None of the mothers in Group 2 reported being separated or widowed (Table 3).

All of the women ($n=10$) received some form of pain medication during their labor or delivery. The majority of the mothers, seven (70%), delivered vaginally, while three, 3 (30%), reported cesarean section deliveries.

Seven of the mothers (70%) reported that they were breastfeeding their newborns. Three mothers (30%) indicated that they had chosen to bottle-feed their newborns. The majority of the mothers (60%) stated that they did attend childbirth preparation classes.

All of the mothers ($n=10$) received their postpartum discharge teaching individually by a nurse. Eight of the mothers (80%) stated that they did read the "Me & My Baby" booklet after discharge (Table 4).

Postpartum discharge teaching was done on an average of 41 hours and 30 minutes after delivery. The range for postpartum discharge teaching after delivery was 22 hours and 04 minutes to 64 hours and 34 minutes. Most of the mothers (70%) included the date and time on the posttest but three (30%) did not. The average posttest questionnaire for Group 2 was completed 227 hours and 08 minutes, approximately 9 days, after discharge teaching. The range for questionnaire completion after discharge teaching was 134 hours and 39 minutes, approximately 5 days, to 496 hours, approximately 11 days.

The average hospital stay for mothers in Group 2 was 59 hours. The hospital stay ranged from 48 hours 14 minutes to 67 hours 10 minutes.

Group 2 was the pretest-posttest group. Most of the mothers in this group selected the correct answers to the general postpartum and infant care statements. The mean for the responses to the general knowledge statements by the based on the pretest and posttest was 24.1 ($SD=1.60$) and 25.5 ($SD=0.971$), respectively. Prior to receiving their discharge instructions, four mothers stated that it was normal for them to experience difficulties with urination such as burning, pain, foul smelling urine, or frequency. When the mothers responded to the same statement in the posttest and after receiving discharge instructions, only one (1) mother stated that difficulties with urination were normal. McNemar's Test revealed a statistically significant difference between the pretest and the posttest score for the responses to the urination statement ($\chi^2=5.0$, $df=1$, $p=0.025$). One mother (10%) responding in the pretest and one mother (10%) responding in the posttest were not aware of the normal changes in vaginal bleeding during the postpartum period. Two of the mothers responding in the pretest were not aware of what constituted excessive vaginal bleeding after delivery and when to notify their physician about this serious problem. After receiving postpartum discharge instructions, one mother (10%) responded that she did not know that saturating a maxi-pad in an hour or less was too much bleeding and that she should notify her physician ($\chi^2=1.0$, $df=1$, $p=0.317$).

Table 3

Demographic Characteristics - Group 2, (n=10)

<u>Characteristic</u>	<u>n</u>	<u>%</u>
<u>Age</u>		
18-23	4	40.0
24-29	5	50.0
30-35	0	0.0
36-41	1	10.0
Total	10	100.0
<u>Education Level</u>		
11 years	1	10.0
12 years	1	10.0
13 years	1	10.0
14 years	1	10.0
15 years	2	20.0
16 years	1	10.0
16+ years	3	30.0
Total	10	100.0
<u>Marital Status</u>		
Single	2	20.0
Married	7	70.0
Separated	0	0.0
Divorced	1	10.0
Total	10	100.0
<u>Race</u>		
African-American	2	20.0
Hispanic	1	10.0
White	7	70.0
Other	0	0.0
Total	10	100.0

Table 4

Childbirth Factors - Group 2, (n=10)

<u>Factors</u>	<u>n</u>	<u>%</u>
<u>Pain Medication</u>	10	100.0
Epidural	9	90.0
Stadol	0	0.0
Nubain	4	40.0
Other		
Demerol & Phenergan	1	10.0
Demerol	1	10.0
Pudendal	1	10.0
Total	*	*
<u>Type of Delivery</u>		
Vaginal	7	70.0
Cesarean Section	3	30.0
Total	10	100.0
<u>Childbirth Preparation</u>		
Yes	6	60.0
No	4	40.0
Total	10	100.0
<u>Method of Discharge Teaching</u>		
Individual by RN	10	100.0
Class taught by RN	0	0.0
Total	10	100.0
<u>Read 'Me & My Baby' booklet since discharge</u>		
Yes	8	80.0
No	2	20.0
Total	10	100.0

*The total will not equal 10 or 100% respectively, because some of the mothers received more than one form of pain medication during their labor, delivery, or both.

One mother (10%) responding to the pretest statement related to maternal activity was not aware that the first two weeks after delivery were a time of recuperation and rest.

However, after receiving postpartum discharge instructions, all of the mothers understood that it was important to maintain a lower level of activity during the first two weeks after delivery. One mother (10%) responded in the pretest that she did not know that should she have postpartum problems or questions, nurses were available by phone on the postpartum unit 24 hours per day or in the OB Clinic during regular business hours to answer questions; all of the mothers responded correctly after their discharge teaching.

One of the mothers (10%) responding in the pretest was not aware of the appearance of a normal bowel movement for a newborn. After discharge teaching all of the mothers were aware of the appearance of a normal newborn bowel movement. One of the mothers (10%) responded incorrectly in the pretest to the infant car seat placement statement. Surprisingly, after discharge teaching, two of the mothers (20%) responding in the posttest thought placing the infant car seat securely in the front seat was appropriate. However, this is not statistically significant ($\chi^2=0.333$, $df=1$, $p=0.564$).

Seven mothers (70%) indicated that they were breastfeeding their newborns. One mother (14.3%) responding to the pretest statement regarding sore nipples or plugged milk ducts was not aware that changing the infant's position during feeding might alleviate the pain. After receiving discharge teaching all of the breastfeeding mothers ($n=7$) responded correctly to this statement. Two of the breastfeeding mothers (28.6%) responding in the pretest were not aware that it is normal for their nipples to be sore and

tender during the first few days of nursing their newborn. However, after the discharge teaching, all of the breastfeeding mothers responded correctly to this statement. Three mothers ($n=3$) chose to bottle-feed their newborns and responded appropriately to the pretest and posttest statements about bottle-feeding.

Further analysis within the pretest and posttest group, indicates that in the general postpartum and infant care categories, discharge teaching was effective and most mothers remembered the information discussed in the discharge teaching session ($t=2.44$, $p<0.0368$) (Table 5). When comparing Group 1 (posttest only) with Group 2 at posttest, no statistically significant difference was found (Table 6).

Table 5

Comparison of Correct Responses to Statements about the Postpartum Period and
Newborn Care within Group 2, n=10

Topic	Pretest n (%)	Posttest n (%)
<u>Topic related to Postpartum Period</u>		
Increased Temperature	10 (100)	10 (100)
Signs & Symptoms of UTI	6 (60)	9 (90) *
After Pains	10 (100)	10 (100)
Medication for Postpartum Discomfort	10 (100)	10 (100)
Normal Vaginal Bleeding Changes	9 (90)	9 (90)
Signs of Excessive Vaginal Bleeding	8 (80)	9 (90)
Normal Postpartum Mood Changes	10 (100)	10 (100)
Signs & Symptoms of Postpartum Depression	10 (100)	10 (100)
Nutrition	10 (100)	10 (100)
Activity	10 (100)	10 (100)
Resuming Sexual Intercourse	10 (100)	10 (100)
Weight-lifting During the Immediate Postpartum Period	10 (100)	10 (100)
Availability of Professional Help-Postpartum Nurses	9 (90)	10 (100)
<u>Topic Related to Newborn Care</u>		
Newborn Sleeping Position	10 (100)	10 (100)
Normal Urination Patterns	10 (100)	10 (100)
Spitting Up	10 (100)	10 (100)
Cord Care	10 (100)	10 (100)
Cord 'Falls Off'	10 (100)	10 (100)
Normal Bowel Movement	9 (90)	10 (100)
Abnormal Bowel Movement	10 (100)	10 (100)
Diapering Infant	10 (100)	10 (100)
Spoiling Infant	10 (100)	10 (100)
Infant Safety-Dressing and Bath Time	10 (100)	10 (100)
Infant Safety-Bath Water Temperature	10 (100)	10 (100)
Infant Safety-Car Seat Placement	9 (90)	8 (80)
Availability of Professional Help - Nursery Nurses	10 (100)	10 (100)

*p<.05

Table 6

Comparison of Correct Responses to Statements about the Postpartum Period and
Newborn care between Group 1 and Group 2 (posttest)

Topic	Group 1, n=11 n (%)	Group 2, n=10 n (%)
<u>Topic related to Postpartum Period</u>		
Increased Temperature	9 (81.8)	10 (100)
Signs & Symptoms of UTI	9 (81.8)	9 (90)
After Pains	11 (100)	10 (100)
Medication for Postpartum Discomfort	10 (90.9)	10 (100)
Normal Vaginal Bleeding Changes	11 (100)	9 (90)
Signs of Excessive Vaginal Bleeding	11 (100)	9 (90)
Normal Postpartum Mood Changes	11 (100)	10 (100)
Signs & Symptoms of Postpartum Depression	11 (100)	10 (100)
Nutrition	11 (100)	10 (100)
Activity	11 (100)	10 (100)
Resuming Sexual Intercourse	10 (90.9)	10 (100)
Weight-lifting during the Postpartum Period	11 (100)	10 (100)
Availability of Professional Help-PP Nurses	11 (100)	10 (100)
<u>Topic Related to Newborn Care</u>		
Newborn Sleeping Position	10 (90.9)	10 (100)
Normal Urination Patterns	10 (90.9)	10 (100)
Spitting Up	11 (100)	10 (100)
Cord Care	11 (100)	10 (100)
Cord 'Falls Off'	11 (100)	10 (100)
Normal Bowel Movement	11 (100)	10 (100)
Abnormal Bowel Movement	11 (100)	10 (100)
Diapering Infant	11 (100)	10 (100)
Spoiling Infant	11 (100)	10 (100)
Infant Safety - Dressing & Bath Time	11 (100)	10 (100)
Infant Safety - Bath Water Temperature	11 (100)	10 (100)
Infant Safety - Car Seat Placement	11 (100)	8 (80)
Availability of Professional Help-Nursery Nurses	11 (100)	10 (100)

CHAPTER FIVE

Discussion of Findings

Significant differences regarding general postpartum knowledge were found within Group 2 from pretest to posttest. The majority of mothers in this group gained insight and knowledge from the postpartum teaching they received prior to discharge. Furthermore, the results suggest that new mothers recalled the information after discharge. Of particular interest to the study is the fact most of the incorrect responses made by subjects in Group 2 were specific to the postpartum statements, perhaps this indicates that new mothers are more concerned about newborn care. However, apparently for these subjects, clearer information regarding signs and symptoms of infections and urinary tract infections were needed. Several mothers in both groups responded incorrectly to these statements. One explanation for these incorrect responses is that it may be difficult for new mothers to differentiate between the normal discomforts of urination associated with a vaginal delivery and the signs and symptoms of a urinary tract infection. Some mothers in Group 2 were not aware of the normal changes in vaginal bleeding, specifically color and amount, during the first few weeks after delivery or the amount of bleeding that is considered excessive. Patient identification of possible complications such as postpartum hemorrhage is critical to ensure an optimal postpartum recovery.

Relatively few statements were incorrect for new mothers in Group 2 for both pretest and posttest statements related to newborn care items. However, one item of concern for mothers in Group 2 was the newborn care statement related to proper infant car seat placement. Only one mother responded incorrectly in the pretest to the infant car seat

placement statement, but in the posttest, two mothers responded incorrectly. Possible explanations for this discrepancy may be that the new mothers did not read the statement thoroughly when completing the questionnaire or that the mothers did not recall infant car safety information.

Demographic characteristics were similar for mothers participating in this study. No significant differences were found in the demographic characteristics between Group 1 and Group 2. Childbirth preparation classes may have provided mothers with a beginning base of knowledge about the postpartum period and newborn care since the majority of mothers ($n=13$) attended childbirth classes prior to delivery. In addition, the majority of mothers in this study were well educated. Most of the mothers in the study had more than 14 years of formal education.

Postpartum teaching was done on an individual basis for the majority of mothers in this study ($n=20$). Berger and Cook (1998) found individual teaching 'the preferred method of health education.' The individual attention provided by postpartum nurses during the discharge teaching session may have influenced the mothers in this study to be more attentive during the teaching session, therefore making recall of information easier.

Implications for Postpartum Nursing Practice

Nurses provide health education to patients under their care on a daily basis. Postpartum patients require health information about the physical and emotional changes they will experience as they progress through the postpartum period. In addition to gaining new information about themselves, new mothers also must learn a vast amount of

information about their newborn. The amount of information a new mother is required to learn may seem overwhelming to her. Therefore, it is important for nurses to meet the educational needs of postpartum patients and present the information in a manner that the new mother will understand and will easily recall the information. While much of the information presented to new mothers about the postpartum period is standard, individualizing patient education should be considered when planning teaching strategies. Providing written information to patients may enhance the verbal instructions and also provides patients with reference materials should questions arise after discharge. The majority of mothers in the current study stated that they had read the 'Me and My Baby' booklet after discharge ($n=13$).

Assessing postpartum patients for adequate support systems is also necessary. In the current study, the majority of new mothers were married ($n=16$), indicating some form of social support. This social support may allow the new mother to place her focus on taking in new information about herself and her newborn rather than being concerned with basic needs such as food and shelter.

Scope and Limitations

The sample in this study was limited to postpartum mothers in a military medical center in the Midwest. Results cannot be generalized to other postpartum patients or geographical areas due to the differences among postpartum patients in these locations. The sample size in this study was small, $N=21$. A larger sample would provide greater generalizability. The majority of women in the current study recalled information related

to the postpartum period and newborn care. However, the questionnaire was completed by mothers in this study approximately 6 days to 32 days after discharge for Group 1 and 5 days to 11 days after discharge for Group 2. This factor may have allowed the new mother to gain experience in newborn care prior to questionnaire completion which may have influenced her response. In addition, mothers in this study were at least 18 years old, were well-educated, and received individual discharge instructions. These factors may have also influenced new mothers in being able to recall information about the postpartum period and newborn care. Mothers in this study were hospitalized a minimum of 46 hours (Group 1) and 48 Hours (Group 2). The results of this study may not be supported by other studies where hospital stays are significantly shorter.

Recommendations for Future Study

This study examined the amount of information first time mothers recall about the content of postpartum discharge teaching. It would be interesting to examine new mothers in different settings, of different ages, such as teenagers, in different geographical locations, different educational levels, and new mothers without adequate support systems. Perhaps by looking at these different groups, postpartum nurses could develop and provide a broader base of postpartum information and use various teaching methods.

Another area of interest would be to examine the effectiveness of postpartum teaching conducted in group settings verses individual teaching sessions, or compare verbal postpartum instructions with written postpartum instructions. Clearly, several areas of study are needed to meet education needs of the majority of postpartum mothers.

Conclusion

Postpartum nurses are committed to ensuring optimal transitions for new mothers as they adapt to their new role. Part of this commitment includes providing education for the new mother which will equip her in understanding the changes that she may experience as she progresses through the postpartum period and adapts to her maternal role.

Appendix A

Instrument

Code# _____

POSTPARTUM DISCHARGE TEACHING QUESTIONNAIRE

Please provide an answer for each question. Thank you for participating in this study.

Today's Date & Time _____ Mother's Age _____
Years of Education 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 16+
Infant's Birth Weight _____ Sex of my baby: Boy _____ Girl _____
Marital Status: Single _____ Married _____ Separated _____ Divorced _____ Widowed _____
Type of Delivery: Vaginal _____ Cesarean Section _____
Type of feeding: Breastfeeding _____ Bottlefeeding _____
How would you describe yourself? African-American _____ Hispanic _____ White _____ Other _____
Did you attend childbirth or Lamaze classes? Yes No
How were your discharge instructions given to you? individually by a nurse _____ or by attending a discharge teaching class _____
Have you read your discharge booklet, "Me and My Baby", since you have been home? Yes No

Please circle only one response: True (T) or False (F); and remember this is not a test.

1. If my temperature is 101.2; my temperature is too high and I should report it to my physician. T F
2. After giving birth, it is normal for me to have difficulty with urination, such as burning, pain, foul smelling urine, and/or urinating frequently. T F
3. It is normal for me to experience menstrual-like cramps during the first few days after delivery. T F
4. It is okay for me to take Tylenol or any other pain medication my physician has prescribed for cramps, sore nipples, episiotomy discomfort and/or incision pain. T F
5. During the first several weeks after delivery vaginal bleeding normally decreases in amount and changes color from bright red to pinkish-brown to whitish. T F
6. I should notify my physician immediately if I have saturated a sanitary pad with bright red blood in an hour or less. T F
7. Sometimes I may feel like crying for no reason at all. T F
8. If I can't stop crying or I don't want to take care of myself or my baby, then I need to notify my physician or go to the Emergency Room. T F
9. I should eat a well-balanced diet, especially fiber-rich foods and I should drink lots of fluids, especially water. T F
10. During the first two weeks after delivery, I should try to be very active and try to catch up on my cleaning whenever my baby is sleeping. T F
11. It is best to wait four to six (4-6) weeks after delivering my baby before I have sexual intercourse. T F
12. I should not lift anything heavier than my newborn for the first two weeks after delivery. T F
13. If I have any questions about caring for myself after delivery, I can call the postpartum unit or the OB/GYN Clinic. T F

14. It is best for my baby to sleep on his/her back or side. T F
15. I will know that my baby is eating enough if he/she only has one (1) wet diaper per day. T F
16. If my baby vomits most of his/her feedings (more than spits up) or vomits with force, I should call the pediatrician. T F
17. I should apply rubbing alcohol to the cord stump after each diaper change, making sure that I rub the alcohol where the cord meets the skin. T F
18. A baby's umbilical cord usually falls off in one to two (1-2) weeks after birth. T F
19. My baby's bowel movements (stools) will be greenish-black in the beginning, then will change to a yellow seedy color. T F
20. If my baby's bowel movements (stools) are "rocklike", watery, or blood tinged, I should notify the pediatrician. T F
21. I should check my baby's diaper frequently and change it as needed to provide comfort and prevent diaper rash. T F
22. I will not spoil my baby if I hold him/her, especially when he/she is crying. T F
23. I should never leave my baby unattended during the baby's bath time or when dressing the baby. T F
24. I should always check my baby's bath water to make sure it is not too hot before placing him/her into the bath water. T F
25. When my infant is riding in a car, I should always place him/her securely in an approved car seat and the car seat should be placed in the front seat. T F
26. If I have any questions about caring for my newborn, I can call the nursery or the Peds Clinic. T F
- ANSWER THE FOLLOWING QUESTIONS ONLY IF YOU ARE BREASTFEEDING**
27. My baby may need to nurse at least every two to three (2-3) hours, sometimes even more frequently. T F
28. When I breastfeed my baby I should use one of the following positions: cradle hold, football hold, or side-lying. T F
29. If my nipples are sore or plugged, I should change feeding positions with each feeding. Also I should start with the opposite breast for each feed. T F
30. It is normal for my nipples to be sore and tender during the first few days of nursing my baby. T F
31. Breastfeeding is an effective method of birth control. T F
- ANSWER THE FOLLOWING QUESTIONS ONLY IF YOU ARE BOTTLEFEEDING**
32. During the first few days, I should feed my baby one to two (1-2) ounces of formula every two to four (2-4) hours or as my baby demands. T F
33. I should hold my baby in my arms during each feeding. T F
34. A baby needs to be burped frequently, usually after every ½ ounce of formula. T F
35. If I open a bottle of formula, I should discard it after one (1) hour. T F
36. My baby's bottle can be warmed in the microwave. T F

Appendix B

Patient Information Form

Code # _____

Patient Information

(To be completed by postpartum nurses)

Patient's Name _____

Patient's Address _____

G _____ P _____

Did the patient receive pain medication during labor? Yes No

If yes, please indicate: _____ epidural _____ Stadol _____ Nubain _____

Other, please state _____.

Date & Time of Delivery _____

Date & Time of Discharge Teaching _____

Date & Time of Discharge _____

Total Hours of Hospitalization _____

(To be calculated by investigator)

Age of Baby in Hours At the time of Questionnaire Completion _____

(To be calculated by investigator)

Appendix C
USAF Questionnaire Approval



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE PERSONNEL CENTER
RANDOLPH AIR FORCE BASE TEXAS



09 SEP 1997

MEMORANDUM FOR CAPTAIN GAIL A. REICHERT

FROM: HQ AFPC/DPSAS
550 C Street West, Ste 35
Randolph AFB TX 78150-4737

SUBJECT: Request for Survey Approval (Your letter, 3 Sep 97)

Your proposed survey has been reviewed and is assigned a USAF Survey Control Number contingent upon you making the following changes:

1. Ref Survey Format. The survey form has lines running across the page in several places. If these lines do not serve a valuable purpose they should be omitted.
2. Ref Question 24. The "the" in the following sentence "... before placing the him/her into the bath water" should be deleted. The question should read, "... before placing him/her into the bath water."
3. Ref. Question 25. The phrase "approved care seat" does not match the terminology used later in the sentence (i.e., the next reference to a seat is "car seat"). Recommend all references to the seat use consistent terminology to avoid potential confusion.

With the above changes, a control number of USAF SCN 97-69 is assigned and will expire on 31 Dec 97. Please ensure that the SCN appears on the face of the survey, or in the cover letter, and forward a copy of the survey and the cover letter (in its final form) to us for our files. Additionally, it is important to note that all data collected can be requested by the public under the Freedom of Information Act.

If you have any questions, comments, or concerns please do not hesitate to contact me at (210) 652 - 5680 (DSN 487-5680) or via e-mail (bensoanm@hq.afpc.af.mil). Best of luck during the data collection phase of your project.

MICHAEL J. BENSON, Lieutenant, USAF
Personnel Research Psychologist

Appendix D

Coding Form

Group 1 (Posttest Only)

1. 2AD55
2. 2AD56
3. 2AD57
4. 2AD58
5. 2AD59
6. 2AD60
7. 2AD61
8. 2AD62
9. 2AD63
10. 2AD64
11. 2AD65
12. 2AD66
13. 2AD67
14. 2AD68
15. 2AD69
16. 2AD70
17. 2AD71
18. 2AD72
19. 2AD73

Group 2 (Pre- and Posttest)

1. 3CE15
2. 3CE16
3. 3CE17
4. 3CE18
5. 3CE19
6. 3CE20
7. 3CE21
8. 3CE22
9. 3CE23
10. 3CE24
11. 3CE25
12. 3CE26
13. 3CE27
14. 3CE28
15. 3CE29
16. 3CE30
17. 3CE31
18. 3CE32
19. 3CE33

20. 2AD74	20. 3CE34
21. 2AD75	21. 3CE35
22. 2AD76	22. 3CE36
23. 2AD77	23. 3CE37
24. 2AD78	24. 3CE38
25. 2AD79	25. 3CE39
26. 2AD80	26. 3CE40
27. 2AD81	27. 3CE41
28. 2AD82	28. 3CE42
29. 2AD83	29. 3CE43
30. 2AD84	30. 3CE44
31. 2AD85	31. 3CE45
32. 2AD86	32. 3CE46
33. 2AD87	33. 3CE47
34. 2AD88	34. 3CE48
35. 2AD89	35. 3CE49
36. 2AD90	36. 3CE50
37. 2AD91	37. 3CE51
38. 2AD92	38. 3CE52
39. 2AD93	39. 3CE53
40. 2AD94	40. 3CE54

Appendix E

Correct Answers to Questionnaire for Subjects

Thank you for participating in this study. Your responses will help postpartum nurses improve teaching strategies. Each participant in this study will receive a copy of the correct response to each question. The page number beside the question refers to additional information about the topic of the question found in the "Me and My Baby" booklet provided to you by the nursery.

Questions one through 13 (1-13) pertain to the new mother

1. A temperature greater than 100.5 should be reported to your physician. **Page 2**
2. Report to a physician any difficulty with urination such as burning, pain, foul smelling discharge, and/or urinating frequently. **Page 8**
3. Menstrual-like cramping is normal during the first few days after delivery. **Page 4**
4. Your physician may have prescribed pain medication for cramps, episiotomy discomfort and/or incision pain. Take the medications as prescribed. **Page 4**
5. Vaginal bleeding normally decreases in amount and changes color from bright red to pinkish-brown to whitish. **Page 4-5**
6. If you saturate a maxi-pad with bright red blood in a hour or less, you should notify your physician or go to the Emergency Room. **Pages 2 & 5**
7. You may experience crying periods and not know why you are crying. This is normal. **Page 9**
8. It is not normal to cry all the time or not want to take care of yourself or your infant. Please notify a physician or go to the Emergency Room. **Page 9**
9. Eating a well-balanced diet, especially fiber-rich foods and drinking plenty of water promotes healing after delivery. **Page 6-7**
10. It is important that you rest whenever your baby naps. **Page 2**
11. It is best to wait four to six (4-6) after delivering your baby before you resume sexual intercourse. **Page 3**
12. You should not lift anything heavier than your newborn during the first two weeks after delivery. **Page 3**

13. Please call the postpartum unit or the OB/GYN Clinic if you have any questions about caring for yourself. Remember, nurses are available on the postpartum unit.

OB/GYN Clinic 257-1946/1160; Postpartum Unit 257-1188/1281

Questions fourteen through twenty-six (14-26) pertain to caring for your new infant.

14. Unless your pediatrician has told you otherwise, it is best for your baby to sleep on his/her back. **Page 18**
15. You will know if your baby is getting enough to eat if he/she has eight or more (8+) wet diapers per day. **Page 28**
16. You should notify the pediatrician or the nursery if your baby vomits most of his/her feedings (more than spits up) or vomits with force. **Page 38**
17. You should apply rubbing alcohol to the cord stump after each diaper change, making sure that you rub the alcohol where the cord meets the skin. **Page 38-39**
18. A baby's umbilical cord usually falls off in one to two (1-2) weeks after birth.
Page 38-39
19. Your baby's bowel movements (stools) will be greenish-black in the beginning, then will change to a yellow seedy color. **Page 41-42**
20. If your baby's bowel movements (stools) are "rocklike", watery, or blood tinged, you should notify your pediatrician. **Page 41-42**
21. You should check your baby's diaper frequently and change it as needed to provide comfort and prevent diaper rash. **Page 42**
22. You will not spoil your baby if you hold him/her, especially when he/she is crying.
Page 43-44
23. You should never leave your baby unattended during the baby's bath time or when dressing the baby. **Page 45-49**
24. Before placing your baby into bath water, always check the bath water to make sure it is not too hot. **Page 45-49**
25. When your infant is riding in a car, always place your infant securely in an approved car seat. It is recommended that you place the car seat in the back seat. **Page 52**

26. Please call the nursery or the Peds Clinic if you have any questions about caring for your infant. Nursery 257-1421/1422; Peds Clinic 257-6603/7631

Questions 27-31 pertain to mothers who are breastfeeding only.

27. Your baby should nurse at least every two to three (2-3) hours, sometimes your baby may need to nurse more frequently. **Page 24**
28. You should use one of the following positions when breastfeeding your baby: cradle hold, football hold, or side-lying. **Page 25-27**
29. You should change feeding positions with each feeding and start with the opposite breast for each feed. **Page 24**
30. It is normal for your nipples to be sore and tender during the first few days of nursing your baby. **Page 31**
31. Breastfeeding is not an effective method of birth control. **Page 12**

Questions 32-36 pertain to mothers who are bottlefeeding only.

32. You should feed your baby one to two (1-2) ounces of formula every two to four (2-4) hours or as your baby demands during the first few day. **Page 36**
33. It is important for you to hold your baby when bottlefeeding. **Page 37**
34. In the beginning, you should burp your baby after every ½ ounce of formula.
Page 37
35. If you open a bottle of formula, you should discard it after one (1) hour. **Page**
36. Never warm your baby's bottle in a microwave. A microwave heats unevenly and you may burn your baby's mouth. **Page 37**

Appendix F

Informed Consent Form

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

74th Medical Group
Wright-Patterson Air Force Base, OH 45433

TITLE OF STUDY: How Much First Time Mothers Remember About the Content of Postpartum Teaching Following Discharge

INVESTIGATOR INFORMATION:

Gail A. Reichert, Capt., USAF, Nurse Corps, and Master's Student University of Kentucky, College of Nursing, Under the direction of Dr. Gwendolen Lee, Faculty Advisor

1-800-392-5420 Access 22

[Principal Investigator Name]

[Telephone No. 24/hr/day-work]

I, _____, have been asked to participate in a research study under the direction of Captain Gail Reichert. Other staff registered nurses who work on the Postpartum Unit may assist or act for Captain Reichert.

PURPOSE:

The purpose of this research study is to determine how much first time mothers remember about the content of postpartum teaching after being discharged from the hospital.

DURATION AND LOCATION:

If I am in the group who fills out the questionnaire twice, once before postpartum teaching and again after I have been discharged, my participation in this study will last for a total of approximately 20 minutes. If I am in the group who fills out the questionnaire only once after I have been discharged, my participation in this study will last approximately 10 minutes.

The study will be conducted at the 74th Medical Group, Wright-Patterson AFB, OH for the group who will fill out the questionnaire before postpartum teaching. Both groups will receive a questionnaire by mail after discharge from the hospital.

Informed Consent page 2

PROCEDURES:

I have been told that during the course of this study, the following will occur after volunteering and consenting to participate in this study:

- my chart will be reviewed by a staff nurse on the postpartum unit to get information the study requires
- I will be assigned to group 1 or group 2.
- If I am assigned to group 1, I will receive only one questionnaire in the mail to be completed by me within one to two days after I have been discharged.
- If I am assigned to group 2, I will receive a questionnaire before my postpartum teaching and again after I am discharged
- After completing the questionnaire, I will return it to the investigator, Capt. Gail A. Reichert, by mail in a stamped, addressed envelope provided by the investigator.
- I understand that the questionnaire includes some questions about me and my baby.

EXCLUSIONS: I should not participate in this study if:

- I am under 18 years of age
- I do not speak English
- I delivered my baby before 37 weeks
- My labor and/or delivery was high-risk
- This is not my first baby
- My baby is in the Neonatal Intensive Care Unit

RISKS/DISCOMFORTS:

I have been told that the study may involve the following risks: Completing the questionnaire after I have been discharged creates another task for me as a new mother which may cause additional stress. However, because I have volunteered to participate in this research study, I may drop out of the study at anytime.

BENEFITS:

I have been told that I will receive no direct benefit from my participation in this study, but my participation will help health care practitioners better understand the best time to teach new mothers about the postpartum period and about infant care.

ALTERNATIVES:

There are no alternative questionnaires available if I choose not to participate in this study.

Informed Consent page 3

CONFIDENTIALITY:

Every effort will be made to maintain the confidentiality of my study records. The data from the study may be published; however, I will not be identified by name. My identity will remain confidential unless disclosure is required by law. Postpartum registered nurses at the 74th Medical Group will be allowed to review pertinent sections of my medical and research records related to this study.

RIGHT TO REFUSE OR WITHDRAW:

I understand that I do not have to take part in this study, and my refusal to participate will involve no penalty or loss of rights to which I am entitled. I may withdraw from this study at anytime without penalty or will not change the care I receive or other benefits to which I am entitled.

OFFER TO ANSWER QUESTIONS:

If I have questions about this study, I may call Capt. Gail A. Reichert, USAF, NC, Graduate Student at the University of Kentucky College of Nursing
1-800-392-5420 Access 22

If I have questions about my rights as a research subject, I may call Deb Bachman at (937) 257-4242, at the Medical Center's clinical investigations office.

If a research related injury occurs, I will call Capt. Gail A. Reichert at
1-800-392-5420 Access 22

SIGNATURES:

I understand my rights as a research subject and I voluntarily consent to participate in this study. I understand what the study is about and why it is being done. I will receive a copy of this consent form.

Signature of Research Subject (or legally authorized representative)

Date

Signature of Witness

Date

Signature of Investigator

Date

Appendix G

Faculty Approval

SIGNATURE ASSURANCE SHEET

Principal Investigator's Assurance Statement:

I understand the University of Kentucky's policy concerning research involving human subjects and I agree:

1. to accept responsibility for the scientific and ethical conduct of this research study;
2. to obtain prior approval from the Institutional Review Board before amending or altering the research protocol or implementing changes in the approved consent form;
3. to immediately report to the IRB any serious adverse reactions and/or unanticipated effects on subjects which may occur as a result of this study;
4. to complete, on request by the IRB, the Continuation/Final Review Forms.

SIGNATURE Gail A. Reichert DATE 1 August 1997

NAME TYPED Gail A. Reichert

*Department Chairperson's Assurance Statement:

This is to certify that I have reviewed this research protocol and that I attest to the scientific merit of this study and the competency of the investigator (s) to conduct the project.

SIGNATURE Lynne A. Hall DATE 7/25/97

NAME TYPED Lynne A. Hall, RN, DrPH, Assistant Dean for Research & Doctoral Studies

***If the principal investigator is also the chairperson of the department, the vice chairperson or equivalent should sign the Signature Assurance Sheet.**

**Faculty Advisor's Assurance Statement:

This is to certify that I have reviewed this research protocol and that I attest to the scientific merit of this study and the competency of the investigator (s) to conduct the project.

SIGNATURE Gwendolen Lee DATE 8/1/97

NAME TYPED Gwendolen Lee, Ed.D., R.N., Professor of Nursing

****If the principal investigator is completing this project to meet the requirement of a University of Kentucky academic program, the student's faculty advisor should sign the Signature Assurance Sheet.**

Appendix H

Institutional Review Board



Research and Graduate Studies

Research Subjects Office
315 Kinkead Hall
Lexington, KY 40506-0057
www.rgs.uky.edu/rso/homepg.htm
Nonmedical IRB: (606) 323-2446
Medical IRB: (606) 257-3138
IRB Office: (606) 257-2934
97-00260

Initial Review Approval Ends Project Ends
August 25, 1998 May 1, 1998

TO: Gail A. Reichert, RN
 College of Nursing
 3887 Boston Road
 Lexington, KY 40514

FROM: Chairperson/Vice Chairperson
 Medical Institutional Review Board (IRB)

SUBJECT: Approval of Protocol Number 97-00260

DATE: August 26, 1997

On August 26, 1997, the Medical Institutional Review Board approved your protocol entitled:

How Much New Mothers Remember About the Content of
Postpartum Teaching Following Discharge

This approval extends to any consent/assent document unless the IRB has waived the requirement for documentation of informed consent.

Approval is effective from August 26, 1997 until August 25, 1998. If applicable, attached is the IRB approved consent/assent document(s) to be used when enrolling subjects. [Note, subjects can only be enrolled using consent/assent forms which have a valid "IRB Approval" stamp unless special waiver has been obtained from the IRB.] Prior to the end of this period, you will be sent a Continuation Review Report Form which must be completed and returned to the Research Subjects Office so that the protocol can be reviewed and approved for the next period.

In implementing the research activities, you are responsible for complying with IRB decisions, conditions and requirements. The research procedures should be implemented as approved in the IRB protocol.

Attached for your review is a booklet describing investigator responsibilities after IRB approval has been obtained. Please read the information carefully and retain a copy for your files. If you have questions or need additional information, contact the Research Subjects Office at 257-8315 (Medical) and 323-2446 (Nonmedical).

Linda Linville, Ph.D.
Chairperson/Vice Chairperson

An Equal Opportunity University



Appendix I
Facility Institutional Review Board
DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE MATERIEL COMMAND
WRIGHT PATTERSON AIR FORCE BASE, OHIO

21 November 1997

MEMORANDUM FOR CAPT GAIL REICHERT

FROM: 74th Medical Group/SGHT
Clinical Investigations
4881 Sugar Maple Drive
Wright-Patterson AFB OH 45433-5300

SUBJECT: Proposed Clinical Investigation Protocol

1. The Clinical Investigation protocol you submitted, "How Much New Mothers Remember About the Content of Postpartum Teaching Following Discharge," has received final approval. You may now begin your study.
2. Progress reports will be due annually. The first one will be due in November 1998. You will receive a reminder 30 days in advance when your report is due. If you complete your study prior to this date you may request a final report form from this office upon completion.
3. Any unanticipated major adverse reactions or other medical misadventures must be reported immediately to the department chairperson, the Chief of Medical Staff, the Clinical Investigations Coordinator and ultimately the commander IAW AFI 40-403. Such events will also need to be summarized in the subsequent progress report.
4. If you anticipate separating from the Air Force or changing assignments before the protocol is completed, you must notify the Clinical Investigations Office as soon as this is known. You will be required to either formally close the protocol, or to have another investigator take over the study. The latter process requires nomination by the flight chief, submission of a curriculum vitae, and approval by the Institutional Review Board.
5. Please indorse below and return to Clinical Investigations (SGHT). I hope that your study will prove to be a worthwhile experience for you. Let us know if there is any way we can assist you.

Debbie Bachman
DEBBIE BACHMAN
Clinical Investigations Coordinator

1st IND

TO: SGHT/Clinical Investigations

Noted/Acknowledged

Gail A. Reichert
Principle Investigator

21 Nov 97
Date

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VITA

Name: Gail A. Reichert

PII Redacted



Formal Education:

May 1991 BSN - Bethel College, Mishawaka, Indiana

Professional Experience:

August 1991 - Present Captain - United States Air Force

August 1991 - August 1996 Captain - 74th Medical Group, Wright-Patterson AFB, OH
Labor & Deliver/Postpartum Staff Nurse

May 1991 - July 1991 Graduate Nurse - Memorial Hospital, South Bend, Indiana
Postpartum Staff Nurse

Publications:

Reichert, G. A. (1998). Female circumcision. What you need to know about genital mutilation. AWHONN Lifelines. In press.

Kirk, E. & Reichert, G. (1992). The mentoring relationship: What makes it work?", Imprint, 39 (1), 20-22.